INDEX

KINETICS AND CATALYSIS

Volume 7, Numbers 1-6

KINETICS AND CATALYSIS

Volume 7, Numbers 1-6

(A Translation of Kinetika i Kataliz)

A

Abaev, G. N. - 594
Afanas'ev, V. A. - 301, 481
Agasandyan, V. A. - 278
Akhmerov, K. M. - 265
Aksel'rud, G. A. - 929
Aleksandrova, É. S. - 59
Alfimov, M. V. - 516, 681
Alikina, G. M. - 556
Amerikov, V. G. - 86
Andreev, A. A. - 105, 941
Andreev, B. M. - 416
Antipina, T. V. - 497, 624, 651
Antonov, V. N. - 183
Antonovskii, V. L. - 362, 683
Anufrienko, V. F. - 908, 926
Apel'baum, L. O. - 590
Aref'eva, S. M. - 389
Artyukh, Yu. N. - 82, 229, 490
Aseeva, R. M. - 580
Azatyan, V. V. - 338

B

Babak, A. V. - 531
Baberkin, A. S. - 932
Balandin, A. A. - 245, 273, 488, 553, 876
Balashov, V. M. - 612
Balashova, S. A. - 273
Baranov, Yu. I. - 545
Bartan, O. O. - 260
Basevich, V. Ya. - 348, 912
Basmanova, V. M. - 821
Batekha, I. G. - 681
Baturina, A. A. - 527
Bazhin, N. M. - 140, 633, 643
Belen'kii, L. I. - 475
Belosludtseva, T. V. - 636
Belousov, V. M. - 568
Beresneva, L. S. - 667
Berezin, B. D. - 224
Berezkin, V. G. - 170
Berlin, A. A. - 851
Beskov, V. S. - 582
Blagonravova, A. A. - 389
Bliznakov, G. - 640
Bodyrev, V. V. - 519
Bodyreva, A. V. - 646
Bogdanova, L. P. - 148
Boldyrev, V. V. - 291, 383, 872
Boreskov, G. K. - 125, 239, 255, 416, 458, 461
Borisov, A. A. - 521
Borisov, Yu. A. - 536, 866
Borod'ko, Yu. G. - 685
Brueva, T. R. - 505
Buben, N. Ya. - 208, 475
Bubnov, N. N. - 140, 643, 859
Buchachenko, A. L. - 511
Buchinskaya, M. B. - 484
Bulgakov, N. N. - 536, 866
Bulgakova, G. M. - 304
Bulgakova, Yu. O. - 576
Burmistrov, S. I. - 330
Bursian, N. R. - 493
Buyanova, N. E. - 167
Byakovitch, V. L. - 641

C

Cerny, S. - 640
Chel'tsova, M. A. - 686
Cheng Chang-tsun- 416
Chernov, V. A. - 651
Chernova, A. I. - 41
Chernyshev, E. A. - 208
Chesnokova, R. V. - 322
Chirkov, N. M. - 572
Chirkov, Yu. N. - 533
Chizhikova, G. I. - 585
Chkheidze, I. I. - 208, 475, 686
Chursina, V. M. - 891

D

Danes, Vl. - 542, 880
Danilova, M. M. - 855
Dashevskii, V. A. - 885
Davydova, Z. A. - 493
Denisov, E. T. - 362
Derlyukova, L. E. - 896
Dimitrov, Khr. - 101, 471
Dinkov, Sh. - 641
Dodonov, A. F. - 341, 610
Dokukina, E. S. - 580
Dolin, P. I. - 840
Dolmatov, S. A. - 21, 193
Drabkina, A. Kh. - 287
Druz', V. A. - 938
Dzevitskii, B. E. - 162
Dzis'ko, V. A. - 125, 447, 576, 960

E

Éidus, Ya. T. - 308, 654
Emanuel', N. M. - 355
Enikolopyan, N. S. - 648
Éntelis, S. G. - 411, 533, 552
Érdedi, G. A. - 322
Eremenko, N. K. - 529
Eremin, L. I. - 872
Erokhina, V. R. - 308, 654
Eroshkin, V. I. - 291, 633
Ershov, N. I. - 308, 654
Ershov, Yu. A. - 527
Étlis, V. S. - 183
Evzerikhin, E. I. - 934
Ezhkova, Z. I. - 670

F

Fasman, A. B. - 658
Fedorovo, V. S. - 949
Fedorovskaya, É. A. - 340, 626
Fel'dblyum, V. Sh. - 155
Filimonov, V. N. - 451
Filippova, A. G. - 461
Finkel'shtein, A. I. - 198
Flid, R. M. - 265, 398, 629
Fogel', Ya. M. - 556, 635
Fokina, B. A. - 260
Freidlin, L. Kh. - 891
Frolkina, I. T. - 461
Frolov, V. M. - 502

G

Gadzhi-Kasumov, V. S. - 245
Gantmakher, A. R. - 389
Gerasimova, G. F. - 926
Gershingordina, A. V. - 568
Gil'burd, M. M. - 136

Godunova, L. F. - 553, 876
Gol'danskii, V. I. - 634
Golovina, O. A. - 580
Gorbunov, A. I. - 322
Gordeeva, V. A. - 52
Gordon, E. B. - 511
Gorgoraki, V. I. - 239
Gorokhovatskii, Ya. B. - 65
Gridnev, Yu. M. - 556
Grigorovich, S. L. - 615
Grosheva, V. M. - 604
Gur'yanova, R. N. - 461

H

Hladek, L. - 640

I

Idel's, S. L. - 484
Il'in, V. F. - 536
Ioffe, I. I. - 612, 670, 949
Isagulyants, G. V. - 245
Ivanov, G. V. - 519
Ivanov, V. N. - 648
Ivanov, V. V. - 648

K

Kabiev, T. - 658
Kadenatsi, B. M. - 52, 634
Kagan, Yu. B. - 597
Kalechits, I. V. - 541
Kaliberdo, L. M. - 549
Kamneva, L. S. - 612
Karakchiev, I. G. - 125, 960
Karnaukhov, A. P. - 167
Kartashov, L. M. - 265
Kasatkina, L. A. - 86, 239
Kazanskii, V. B. - 627
Kefeli, L. M. - 125, 162, 576
Keier, N. P. - 319, 556, 636, 926
Ken-Ichi Tanaka, - 219
Kenzi Tamaru - 219
Kiperman, S. L. - 105, 245, 563, 941
Kiselev, A. V. - 621
Klabunovskii, E. I. - 488, 553
Klier, K. - 961
Kogan, S. B. - 493
Kogarko, S. M. - 348, 521, 912
Kolbanovskii, Yu. A. - 639
Kolesnikov, I. M. - 609
Kolosova, L. G. - 531
Kolot, V. Ya. - 556
Kolovertnova, M. - 447, 576
Koltunov, V. S. - 202
Kolvertnov, G. D. - 125
Komarov, V. F. - 519
Komissarova, G. P. - 155
Konstantinova, N. A. - 333
Korenevskaya, F. V. - 902, 951
Korneichuk, G. P. - 333
Korolev, G. V. - 851
Korytko, L. A. - 634
Kotsarenko, N. S. - 447, 960
Koval'skii, A. A. - 175
Kovrizhnykh, E. A. - 821
Kozlov, V. M. - 403
Kozlova, T. P. - 661
Khannanov, T. M. - 313
Khasin, A. V. - 162
Khodakov, Yu. S. - 509
Khokhlova, T. P. - 319
Khomenko, A. A. - 590
Kho Shi Tkhoang - 561
Khristoforov, B. S. - 328
Krasovskaya, T. A. - 845
Krivanek, M. - 542, 880
Krivoruchko, O. P. - 678
Khrushch, A. P. - 615
Krylov, O. V. - 260
Krylova, A. V. - 59, 896
Krylova, Z. L. - 840
Kuchynka, K. - 961
Kubicka, H. - 641
Kudryavtseva, Yu. I. - 188
Kulbanovskii, Yu. A. - 170
Kul'kova, N. V. - 674
Kupcha, L. A. - 621
Kurochkin, É. S. - 377
Kuvshinova, N. I. - 536
Kuznetsov, É. V. - 140, 643
Kuznetsova, A. S. - 328
Kyazimov, E. A. - 170

L

Lachinov, S. S. - 322
Ladygin, B. Ya. - 832
Latov, V. K. - 35
Latyshev, V. P. - 431
Lavrentovich, R. F. - 82, 229, 490
Lavrorskaya, G. K. - 341, 610
Lavrovskii, P. - 131
Lazerko, G. A. - 295
Lebedev, N. N. - 403, 545
Lebedeva, M. M. - 902
Leenson, I. A. - 631
Leont'evskaya, P. K. - 922
Levina, D. A. - 82
Likhtenshtein, G. I. - 919
Likhtmanovich, A. D. - 278
Litvin, E. F. - 891
Loginov, G. A. - 618
Logvinenko, M. G. - 525
Lukovnikov, A. F. - 527
Luk'yanova, L. I. - 151, 605
Lyadno, V. A. - 420, 944
Lyashenko, O. K. - 683
Lyashenko, V. I. - 946
Lygin, V. I. - 621
Lykhin, V. M. - 383, 872
Lyubarskii, G. D. - 232, 934
Lyudkovskaya, B. G. - 493

M

Maidanovskaya, L. G. - 500
Maizus, Z. K. - 304, 355
Mal'kovskaya, D. V. - 301
Marchenko, V. I. - 202
Margolis, L. Ya. - 59
Markin, M. I. - 1
Markov, M. A. - 618
Masterova, M. N. - 639
Mastikhin, V. N. - 125, 956
Matkovskii, P. E. - 572
Matveev, K. I. - 529, 855
Mikhailova, I. L. - 636
Mikhlin, V. E. - 52
Minachev, Kh. M. - 509, 618
Min'kov, A. I. - 556
Mironov, B. F. - 208
Möger, D. - 641
Moin, F. B. - 136
Molim, Yu. N. - 208, 367
Mordvintseva, L. P. - 295
Morozov, N. M. - 151, 605
Mozzhova, V. N. - 646
Müller, J. - 171, 961
Muravskaya, G. K. - 322
Mushkin, Yu. I. - 198
Myashnikov, I. A. - 178

N

Nagy, F. - 641
Naberukhin, Yu. I. - 367
Nad', F. - 7
Naryshkina, T. I. - 667
Nashibochnikov, B. M. - 678
Neokladnova, L. N. - 607
Nesterov, O. V. - 411, 533, 552
Nikolaev, Yu. T. - 612
Nikolajenko, V. - 542, 880
Nikitin, V. Ya. - 919

O

Oblivantsev, A. N. - 383, 872
Orekhov, V. D. - 41
Orlov, V. M. - 372
Osmolovskii, G. M. - 493
Ostrovskii, G. M. - 232
Ostrovskii, V. E. - 466

P

Panchenkov, G. M. - 609
Pavlov, B. V. - 827
Pavlov, V. A. - 488

Pechnikov, V. G. - 932
Pelova, R. - 101
Pendin, A. A. - 922
Peshev, O. - 72
Petno, A. - 641
Petsev, N. - 471
Piguzova, L. I. - 561
Pis'men, L. M. - 588
Plyasova, L. M. - 125, 525
Pokhodenko, L. A. - 929
Polak, L. S. - 21, 916
Polikarova, R. - 640
Poltavchenko, Yu. A. - 431
Pones, V. - 640
Ponomarenko, A. T. - 597
Ponomarev, A. N. - 214, 372, 511, 845
Ponomareva, T. I. - 845
Popov, B. I. - 125
Popova, N. I. - 431
Pospelova, I. N. - 178
Prodan, E. A. - 638
Pronina, I. A. - 389
Purmal', A. P. - 919
Pushkareva, G. A. - 658

R

Raikova, G. A. - 536
Rashchupkina, Z. A. - 667
Reshetnikov, S. M. - 251
Roginskii, S. Z. - 118
Romanovskii, B. V. - 561
Romanovskii, V. V. - 159
Rosolovskaya, E. N. - 664
Rozenberg, M. Sh. - 621
Rozental', A. L. - 131
Rozovskii, A. Ya. - 597, 902, 951
Rubanik, M. Ya. - 568
Rubinshtein, A. M. - 316, 505, 626
Rudnitskii, L. A. - 674
Rufov, Yu. N. - 118, 377
Rusin, L. Yu. - 827
Rusov, M. T. - 82, 229, 490
Ryss, I. G. - 148, 287, 484
Ryzhak, I. A. - 162, 461, 576

S

Sakharov, M. M. - 580
Salenko, V. I. - 949
Salikhov, K. M. - 383
Samsonov, G. V. - 604
Saraeva, V. V. - 832
Sakisyan, É. N. - 338
Savel'ev, G. G. - 46, 377
Sazonov, L. A. - 255, 458, 525, 944
Sazonova, I. S. - 319, 636
Schastnev, P. V. - 859
Seliverstova, E. I. - 885
Serba, A. A. - 946
Sergeev, G. B. - 631
Shagisultanova, G. A. - 607
Shakhnovskaya, O. L. - 664
Shapatina, E. N. - 605
Sharipov, A. Kh. - 313
Shatenshtein, A. I. - 821
Shchipachev, V. S. - 916
Shelimov, B. N. - 478
Shestakov, G. K. - 629
Shevchuk, V. U. - 136
Shilov, E. A. - 26, 615, 685
Shilova, A. K. - 685
Shimandi, L. - 7
Shimulis, V. I. - 439
Shiryaeva, T. I. - 500
Shitova, N. B. - 855
Shkarin, A. V. - 634
Shmidt, F. K. - 541
Shopov, D. M. - 105, 941
Shuikin, N. I. - 667
Shushunov, V. A. - 144
Shvachko, V. I. - 556, 635
Shvets, V. A. - 627
Sidorov, A. A. - 908
Skachkov, G. I. - 521
Skibida, I. P. - 304
Skrebkova, L. M. - 328
Skvortsov, E. V. - 536
Slinkin, A. A. - 340, 626
Slin'ko, M. G. - 582
Slovetskaya, K. I. - 316, 505
Slovokhotova, T. A. - 273
Smirnov, B. R. - 851
Smirnov, I. A. - 93
Smirnov, V. A. - 516, 681
Snagovskii, Yu. S. - 232
Sobolevskii, M. V. - 845
Sokol'skaya, A. M. - 251
Sokolovskii, V. D. - 255, 458
Sokol'skii, D. V. - 658, 885
Solntseva, L. V. - 362
Solonitsyn, Yu. P. - 112, 297, 424
Sorokin, M. F. - 35
Sosnikova, N. I. - 224
Spirin, Yu. L. - 389
Stepko, I. I. - 946
Strunin, V. P. - 341, 610
Subbotin, A. I. - 183
Sukhareva, G. A. - 612
Suzdalev, I. P. - 634

T

Tal'roze, V. L. - 1, 341, 511, 610
Tarasova, D. V. - 125
Temkin, M. I. - 151, 466, 590, 605, 629
Thong, Ho Shi, - 159
Tikhomirova, S. P. - 624
Tikhonov, G. F. - 629
Timofeeva, E. A. - 435
Tkacheva (Sukhanova), O. P. - 511
Tokina, A. A. - 615
Tomilenko, B. I. - 26
Topchieva, K. V. - 159, 561, 664
Torgasheva, A. A. - 549
Tovbin, M. V. - 661
Treger, Yu. A. - 398
Trofimov, V. I. - 475
Trushkina, N. I. - 481
Tsailingol'd, T. A. - 155
Tsionskii, V. M. - 416
Tyurenkova, O. A. - 885

U

Usov, Yu. N. - 536
Uvarov, A. V. - 624

V

Vaabel', A. S. - 549
Vainshtein, F. M. - 26
Vasil'ev, G. K. - 686
Vasilevich, L. A. - 461
Vazhin, N. M. - 859
Vedeneev, V. I. - 188
Verlan, Zh. F. - 568
Vershinina, N. D. - 497
Vinnikova, T. S. - 576
Vladov, D. - 641
Voevodskii, V. V. - 140, 175, 208, 367, 643, 859
Volkov, V. P. - 648
Volkova, E. V. - 932
Vorontseva, N. A. - 398
Vovyanko, I. I. - 65
Vurzel', E. B. - 916
Vysochenko, V. G. - 333

Y

Yablokov, V. A. - 144
Yablokova, N. V. - 144
Yagodovskii, V. D. - 615
Yanovskii, M. I. - 678
Yantovskii, S. Ya. - 16

Z

Zabrodin, V. B. - 533, 552
Zaikov, G. E. - 355
Zaitsev, B. E. - 670
Zakhar'evskii, M. S. - 922
Zakharov, Yu. A. - 46, 377
Zavorokhin, N. D. - 572
Zelenyak, T. I. - 582

Zenin, S. V. - 631
Zhabrova, G. M. - 52, 634
Zhidomirov, G. M. - 859
Zhuravlev, V. A. - 531
Zhuraviev, V. K. - 519
Zusman, R. I. - 367

KINETICS AND CATALYSIS

Volume 7, Numbers 1-6, 1966

(A Translation of Kinetika i Kataliz)

Number 1 January-February, 1966

	Engl.	Russ.
An Investigation of the Effect of Kinetic Energy of Relative Motion on Ion-Molecule Reaction Cross Sections—M. I. Markin and V. L. Tal'roze	1	3
The Analogy between Homogeneous and Heterogeneous Activators of H_2 Molecules —F. Nad' and L. Shimandi	7	11
Two-Stage Combustion of Explosive Mixtures. III. Kinetic Zones of Autoignition of Isooctane—Air Mixtures under High Pressures—S. Ya. Yantovskii	16	21
Kinetics for Radiation Allyl Polymerization. II.—S. A. Dolmatov and L. S. Polak	21	27
Kinetics and Mechanism of the Iodination of Aromatic Amino Compounds by Iodine Monochloride in Aqueous Hydrochloric Acid Solution —F. M. Vainshtein, B. I. Tomilenko, and E. A. Shilov	26	33
Kinetics of the Reaction of Phosphonitrilochloride Trimer with Sodium Alkoxides —M. F. Sorokin and V. K. Latov	35	42
The Products of Benzene Radiolysis in Aqueous Sodium Nitrate Solutions and the Kinetics of Their Accumulation—A. I. Chernova and V. D. Orekhov	41	49
The Use of Additives to Alter the Physicochemical Properties of Solids. VI. The Role of Contact Phenomena in the Catalysis of Solid Phase Thermal Decompositions by Semiconducting Additives—Yu. A. Zakharov and G. G. Savel'ev	46	55
The Influence of Ionizing Radiation and Other Factors on the Rate of the Topochemical Processes Involved in the Decomposition of Various Inorganic Compounds —V. A. Gordeeva, G. M. Zhabrova, B. M. Kadenatsi, and V. E. Mikhlin	52	62
Electronic Properties and Activity of Complex Hydrocarbon Oxidation Catalysts —L. Ya. Margolis, A. V. Krylova, and É. S. Aleksandrova	59	69
The Effect of the Reaction Mixture on a Copper Catalyst for the Oxidation of Propylene —Ya. B. Gorokhovatskii, I. I. Vovyanko, and M. Ya. Rubanik	65	76
A Possible Irreversible Form of Chemisorption on Semiconductors—O. Peshev	72	84
The Relation between Properties and Electronic Structures in Iron-Cobalt Catalysts —R. F. Lavrentovich, M. T. Rusov, Yu. N. Artyukh, and D. A. Levina	82	94
The Catalytic Activity of Manganese Dioxide with Respect to the Reaction of Isotopic Exchange in Molecular Oxygen—L. A. Kasatkina and V. G. Amerikov	86	99
The Calculation of Rate Constants for the Ammonia Synthesis in a Flow System with Reversible Poisoning of the Catalyst by Water Vapors—I. A. Smirnov	93	107
Dealkylation of n-Amylbenzene on Aluminosilicate Catalyst—Khr. Dimitrov and R. Pelova	101	116
Kinetics of Cyclohexane Dehydrogenation in a Gradientless System. II.—A. A. Andreev, D. M. Shopov and S. L. Kiperman	105	120
Photodesorption and Photosorption of Oxygen on Zinc Oxide. Comparison with Photoconductivity—Yu. P. Solonitsyn	112	128
A Study of the Chemosorption of Mixtures on NiO—S. Z. Roginskii and Yu. N. Rufov	118	136

Engl./Russ.

Study of an Iron-Molybdenum Oxide Catalyst for the Oxidation of Methanol to Formaldehyde. II. Phase Composition and Nature of the Catalytically Active Component—G. K. Boreskov, G. D. Kolovertnov, L. M. Kefeli, L. M. Plyasova, L. G. Karakchiev, V. N. Mastikhin, V. I. Popov, V. A. Dzis'ko, and D. V. Tarasova 125 144

Kinetics of Sorption and Chemical Reaction on a Catalyst with a Homogeneous Surface in a Boiling Bed with a System of Complete Mixing of Particles and Gas—P. Lavrovskii, and A. L. Rozental' 131 151

BRIEF COMMUNICATIONS

Studies on the Kinetics of Rapid High-Temperature Reactions by Means of Mass-Spectrometry. I. The Thermal Decomposition of Acetone Reaction—M. M. Gil'burd, F. B. Moin, and V. U. Shevchuk 136 157

Reactions of the Hydrogen Atom in the $H_2O + H_2SO_4 + FeSO_4$ System. II. Reactions with Unsaturated Compounds—N. M. Bazhin, É. V. Kuznetsov, N. N. Bubnov, and V. V. Voevodskii 140 161

Kinetics of the Heterolytic Rearrangement of Cumyl Perbenzoate and Some of its Derivatives —N. V. Yablokova, V. A. Yablokov, and V. A. Shushunov 144 165

Kinetics of Alkaline Hydrolysis of Trimethylamine Sulfotrioxide—I. G. Ryss and L. P. Bogdanova 148 169

The Oxidation of Ammonia on Metal Oxides—N. M. Morozov, L. I. Luk'yanova, and M. I. Temkin 151 172

Mechanism of the Conversion of 2-Methylpentene-1 on an Aluminosilicate Catalyst —V. Sh. Fel'dblyum, G. P. Komissarova, and T. A. Tsailingol'd 155 175

Use of a Pulsed Micromethod for Determining the Concentration of Active Centers by Poisoning the Catalyst—V. V. Romanovskii, Ho Shi Thong, and K. V. Topchieva 159 179

A Study of the Structure of Platinum Films—I. A. Ryzhak, L. M. Kefeli, B. E. Dzevitskii, and A. V. Khasin 162 182

Improved Device for Measuring the Specific Surface Area of Catalysts with Respect to the Adsorption of Krypton—N. E. Buyanova and A. P. Karnaukhov 167 184

LETTERS TO THE EDITOR

Kinetics of the Radiation Polymerization of Acrylonitrile from the Gas Phase on a Mineral Substrate—V. G. Berezkin, Yu. A. Kolbanovskii, and E. A. Kyazimov 170 187

The Nature of the Adsorption of Oxygen on Nickel—J. Muller 171 188

Number 2 March-April, 1966

Nikolai Nikolaevich Semenov (On His 70th Birthday)—V. V. Voevodskii and A. A. Koval'skii. . 175 193

A Study of Hydrogen Atom Recombination Using Diffusion Calorimetry and Semiconductor Probes—I. N. Pospelova and I. A. Myasnikov 178 196

Kinetics of the High Temperature Chlorination of Ethylene in a Flow System—A. I. Subbotin, V. N. Antonov, and V. S. Étlis 183 202

Kinetics and Mechanism of the Thermal Decomposition of Ethane. II —Yu. I. Kudryavtseva and V. I. Vedeneev 188 208

Analysis of the Kinetics of Radiation Allyl Polymerization. III—S. A. Dolmatov 193 214

Decomposition of Dicyanodiamide in Aqueous Alkaline Media—Yu. I. Mushkin and A. I. Finkel'shtein 198 219

Kinetics of the Oxidation of Hydrazine by Nitrous Acid—V. S. Koltunov and V. I. Marchenko. . 202 224

Formation of Radicals by Radiolysis of Organic Solids. III. EPR Spectra and Radiolytic Yields of Radicals in Some Organosilicon Compounds—I. I. Chkheidze, Yu. N. Molin, B. F. Mironov, E. A. Chernyshev, N. Ya. Buben, and V. V. Voevodsky 208 230

The Reaction of Atomic Oxygen, Generated in the Gas Phase, with Solid Hydrocarbons. I. Reactions of Atomic Oxygen with Solid Ethylene at 65-69°K—A. N. Ponomarev..... 214 237

	Engl.	Russ.
On One General Principle of the Catalytic Activity of Metals—Ken-Ichi Tanaka and Kenzi Tamaru	219	242
Influence of the Nature of the Cation of the Salt on the Kinetics of the Formation of of Pheophytinates in Ethanol—B. D. Berezin and N. I. Sosnikova	224	248
The Relation between Catalytic Properties and Electronic Structure in Cobalt-Nickel Catalysts —R. F. Lavrentovich, M. T. Rusov, and Yu. N. Artyukh	229	254
The Kinetics of the Hydrogenation of Benzene on Nickel. I. Reaction in the Kinetic Region —Yu. S. Snagovskii, G. D. Lyubarskii, and G. M. Ostrovskii	232	258
Catalytic Properties of NiO in the Reaction of Homomolecular Exchange of Oxygen —V. I. Gorgoraki, G. K. Boreskov, and L. A. Kasatkina	239	266
On the Kinetics of the Dehydrogenation of Cyclohexane on Chromium Oxide in a Gradientless System. I —V. S. Gadzhi-Kasumov, S. L. Kiperman, G. V. Isagulyants, and A. A. Balandin	245	273
The Effect of pH on the Kinetics of Hydrogenation over a Palladium Catalyst —S. M. Reshetnikov and A. M. Sokol'skaya	251	279
Homomolecular and Isotopic Exchange of Oxygen on Gadolinium Oxide—L. A. Sazonov, V. D. Sokolovskii, and G. K. Boreskov	255	284
The Effect of Catalyst Surface Acidity on the Rate of Polymerization of Three-Membered Heterocycles—O. O. Bartan, O. V. Krylov, and B. A. Fokina	260	289
The Kinetics and Mechanism of the Catalytic Conversions of Acetylene. I. The Kinetics of the Synthesis of Acetonitrile from Acetylene and Ammonia on a Catalyst of Zinc Oxide and Aluminum Oxide—K. M. Akhmerov, R. M. Flid, and L. M. Kartashov	265	295
Kinetics for the Splitting of Cyclohexane by the Action of Steam on Nickel Catalysts —S. A. Balashova, T. A. Slovokhotova, and A. A. Balandin	273	303
Kinetics of Copolymerization in a Flow-Type Reactor with Ideal Mixing—A. D. Likhtmanovich and V. A. Agasandyan	278	309
BRIEF COMMUNICATIONS		
Kinetics of the Alkaline Hydrolysis of the Fluorosulfonate Ion—I. G. Ryss and A. Kh. Drabkina	287	319
Influence of Heterophase Additives upon the Thermal Decomposition of Silver Nitrite —V. V. Boldyrev and V. I. Eroshkin	291	322
Peculiarities of Thermal Decomposition of $NiSO_4 \cdot (NH_4)_2SO_4$—G. A. Lazerko and L. P. Mordvintseva	295	326
Partial Desorption during Conversion of Chemisorbed Oxygen into a Higher-Charge State —Yu. P. Solonitsyn	297	327
Catalytic Action of Nitrogen-Containing Compounds on Isomeric Transformations of Carbohydrates. I. Action of Aliphatic Amines in the α, β-Isomerization of d-Glucose —V. A. Afanas'ev and D. V. Mal'kovskaya	301	330
Mechanism of Chain Branching in the Catalyzed Oxidation of n-Decane in the Presence of Cobalt Stearate—G. M. Bulgakova, Z. K. Maizus, and I. P. Skibida	304	332
Oxygen-Induced Heterogeneous Catalytic Reaction of Olefin Condensation in the Presence of Hydrogen. VI. Conversions of Pentene-1—N. I. Ershov, Ya. T. Éidus, and and V. R. Erokhina	308	336
Vapor Phase Oxidation of the Partially Hydrogenated Benzene Derivatives—A. Kh. Sharipov and T. M. Khannanov	313	340
The Valence of Chromium in the Active Centers on an Aluminum-Chromium-Potassium Dehydrating Catalyst—K. I. Slovetskaya and A. M. Rubinshtein	316	342
Decomposition of Isopropyl Alcohol on Titanium Dioxide with Anatase Structure —T. P. Khokhlova, I. S. Sazonova, and N. P. Keier	319	345
Chemisorption of Nitrogen on Precipitated Iron Catalysts for Ammonia Synthesis. II —R. V. Chesnokova, A. I. Gorbunov, S. S. Lachinov, G. K. Muravskaya, and G. A. Érdedi	322	348
Phase Analysis of Iron-Molybdenum Catalysts—A. S. Kuznetsova, L. M. Skrebkova, and B. S. Khristoforov	328	354

	Engl.	Russ.
Tables and Plot for Determining the Maximum Yields of Primary Products from Consecutive-Parallel Reactions—S. I. Burmistrov	330	356
Improved Gradientless Reactors with Piston Turbulizer for Investigating the Kinetics of Heterogeneous Catalytic Processes—G. P. Korneichuk, V. G. Vysochenko, and N. A. Konstantinova	333	358
New Design of Reaction Vessel for Investigating Gas Reactions by the EPR Method —É. N. Sarkisyan and V. V. Azatyan	338	362
LETTERS TO THE EDITOR		
EPR Spectrum of $CrCl_3$ on a Carrier—A. A. Slinkin and É. A. Fedorovskaya	340	364

Number 3 May-June, 1966

	Engl.	Russ.
Mass Spectrometric Measurement of the Rate Constants of Elementary Reactions. I. Method of the Diffusion Cloud in a Beam. Theory —A. F. Dodonov, G. K. Lavrovskaya, V. P. Strunin, and V. L. Tal'roze	341	385
The Mechanism by Which the Products of a Glow Discharge Affect the Velocity of Hydrogen-Oxygen Flames under the Conditions of the Inflammation Peninsula — V. Ya. Basevich and S. M. Kogarko	348	393
The Effect of Solvents on Elementary Reactions of Chain Lengthening and Rupture during Oxidation of Methyl Ethyl Ketone — G. E. Zaikov, Z. K. Maizus, and N. M. Emanuel'	355	401
The Mechanism of Liquid-Phase Oxidation of Cumene, Studied by the Inhibition Method. III. Formation of Reaction Products and Their Effect on Radical Decomposition of a Hydroperoxide — V. L. Antonovskii, E. T. Denisov, and L. V. Solntseva	362	409
Kinetics of the Reaction of Divalent Iron with Diphenylpicrylhydrazyl — R. I. Zusman, Yu. L. Naberukhin, Yu. N. Molin, and V. V. Voevodskii	367	414
The Reaction of Atomic Oxygen, Generated in the Gas Phase, with Solid Hydrocarbons. II. Reactions of Atomic Oxygen with Solid Propylene at 77-67°K — V. M. Orlov and A. N. Ponomarev	372	419
Change in the Physicochemical Properties of Solid Substances by Additives. VII. Influence of Heterophase Semiconductor Impurities on the Thermal Stability of Silver Azide — Yu. A. Zakharov, É. S. Kurochkin, G. G. Savel'ev, and Yu. N. Rufov	377	425
Influence of Impurities on the Radiolysis of Potassium Nitrate — V. V. Boldyrev, V. M. Lykhin, A. N. Oblivantsev, and K. M. Salikhov	383	432
On the Mechanism of the Reaction of Isocyanates with Alcohols — I. A. Pronina, Yu. L. Spirin, A. A. Blagonravova, S. M. Aref'eva, and A. R. Gantmakher	389	439
Kinetics of the Catalytic Hydrolysis of Allyl Chloride in Alkaline Medium — Yu. A. Treger, R. M. Flid, and N. A. Vorontsova	398	449
Reactions of α-Oxides. IX. Acid Catalysis of the Reaction of Ethylene Oxide with Alcohols and Other Oxygen Compounds — N. N. Lebedev and V. M. Kozlov	403	455
Kinetics and Mechanism of the Catalytic Reaction of Isocyanates with Alcohols in the Presence of Organotin Compounds. I. Kinetics of the Reaction of p-Chlorophenyl Isocyanate with Methyl Alcohol in the Presence of Dibutyltin Dilaurate — S. G. Éntelis and O. V. Nesterov	411	464
Kinetics of Isotopic Exchange between Gaseous Hydrogen and Hydrogen Dissolved in Palladium — B. M. Andreev, G. K. Boreskov, Cheng Chang-tsun, and V. M. Tsionskii	416	470
Contact Potential Difference of Cerium Dioxide in the Presence of O_2, $O_2 + CO$, and $O_2 + CO_2$ — V. A. Lyando	420	475
Kinetics and Possible Mechanism of the Photosorption of Oxygen on Zinc Oxide — Yu. P. Solonitsyn	424	480
Oxidation of Methylacetylene on Copper Catalysts — N. I. Popova, Yu. A. Poltavchenko, and V. P. Latyshev	431	489
Investigation of the Conversions of Hydrocarbons on Various Dehydrogenating Catalysts — E. A. Timofeeva	435	494

	Engl.	Russ.
Kinetics of the Dehydrogenation of Cyclohexene on Palladium Film — V. I. Shimulis.	439	498
Influence of the Method of Preparation and Crystal Structure of the Hydroxide on the Catalytic Activity of Aluminum Oxide — V. A. Dzis'ko, M. Kolovertnova, and N. S. Kotsarenko.	447	508
Investigation of the Photocatalytic Oxidation of Vapors of Organic Compounds on TiO_2 by Methods of Infrared Spectroscopy — V. N. Filimonov.	451	512
Homomolecular and Isotopic Exchange of Oxygen on Cerium Dioxide — L. A. Sazonov, V. D. Sokolovskii, and G. K. Boreskov.	458	521
Study of Catalysts of the Oxidation of Ethylene to Ethylene Oxide — L. A. Vasilevich, G. K. Boreskov, R. N. Gur'yanova, I. A. Ryzhak, A. G. Filippova, and I. T. Frolkina	461	525
Heats of Chemisorption of Oxygen on Silver — V. E. Ostrovskii and M. I. Temkin.	466	529
On the Use of a Pulsed Nonchromatographic Method to Investigate the Kinetics of Heterogeneous Catalytic Reactions — N. Petsev and Khr. Dimitrov.	471	535
BRIEF COMMUNICATIONS		
Radical Formation in the Radiolysis of Solid Organic Substances. IV. The Radiation Yields of Radicals in Certain Compounds — V. I. Trofimov, I. I. Chkheidze, L. I. Belen'kii, and N. Ya. Buben.	475	540
Formation of Free Radicals upon the Ultraviolet Irradiation of Hydrocarbon Solutions of Naphthalene at 77°K — B. N. Shelimov.	478	543
Catalytic Effect of Nitrogen-Containing Compounds on the Conversion of Carbohydrate Isomers. II. Effect of α-Amino Acids on the α,β-Isomerization of d-Glucose — V. A. Afanas'ev and N. I. Trushkina.	481	545
Kinetics for the Alkaline Hydrolysis of $[F_3BONH_2]^-$ and the Acid Hydrolysis of F_3BONH_3 — I. G. Ryss, S. L. Idel's, and M. B. Buchinskaya.	484	548
Stereospecific Mutarotation of α-L-Rhamnose Catalyzed by the Optical Isomers and the Racemate of α-Phenylethylamine — V. A. Pavlov, E. I. Klabunovskii, and A. A. Balandin.	488	551
Dependence of the Catalytic Properties of Iron—Nickel Catalysts on Their Electronic Structure — R. F. Lavrentovich, M. T. Rusov, and Yu. N. Artyukh	490	553
Effect of Alkali Metals on the Properties of Platinum Catalysts in Reactions for the Dehydrocyclization of n-Hexane — N. R. Bursian, S. B. Kogan, G. M. Osmolovskii, B. G. Lyudkovskaya, and Z. A. Davydova	493	556
Catalytic Activity of Aluminum Fluoride — T. V. Antipina and N. D. Vershinina	497	559
On the pH of the Isoelectric State of Aluminosilicate Cracking Catalysts — L. G. Maidanovskaya and T. I. Shiryaeva.	500	562
Electron Work Function of Samples of Germanium with Various Types of Conductivity under the Conditions of a Catalytic Reaction — V. M. Frolov	502	564
Adsorption of n-Hexane on an Alumochromopotassium Catalyst — K. I. Slovetskaya, T. R. Brueva, and A. M. Rubinshtein.	505	566
Feeder Regulating the Supply of Catalyst — Yu. S. Khodakov and Kh. M. Minachev.	509	569

Number 4 July-August, 1966

Study of the Probability for the Recombination of Atomic Hydrogen on Different Surfaces for Low Atom Concentrations in the Gas Phase—E. B. Gordon, A. N. Ponomarev, and V. L. Tal'roze	511	577
Experimental Determination of the Coefficient Characterizing the Probability of the Transition with $\Delta m = \pm 2$ for Triplet States of Organic Molecules —V. A. Smirnov and M. V. Alfimov	516	583
Thermal Decomposition of Nitromethane—A. A. Borisov, S. M. Kogarko, and G. I. Skachkov	521	589
Photochemical Decomposition of Polypropylene Hydroperoxide—Yu. A. Ershov, A. F. Lukovnikov, and A. A. Baturina	527	597

	Engl.	Russ.
A Study of the Relation between the Parameters for the Distribution of the Thermo-emf on the Surface of Copper Oxide and the Catalytic Activity in the Aging Process —V. A. Zhuravlev, L. G. Kolosova, and A. V. Babak	531	602
Study of the Various Forms of Hydrogen Chemisorption on Metals by the Method of the Overlap Integral. I. Dissociative Chemisorption —N. N. Bulgakov and Yu. A. Borisov.	536	608
Hydrogenation of Olefins in the Presence of Complex Organometallic Catalysts —I. V. Kalechits and F. K. Shmidt	541	614
Reactions of Olefin Oxides. X. Kinetics and Mechanism of the Reaction of Ethylene Oxide with Alcohols under Basic Catalysis—N. N. Lebedev and Yu. I. Baranov	545	619
Kinetics and Mechanism of the Reaction between Isocyanates and Alcohols Catalyzed by Organotin Compounds. II. Reagent–Catalyst Complexes as Intermediate Reaction Products—S. G. Éntelis, O. V. Nesterov, and V. B. Zabrodin	552	627
A Study of the Catalytic Action of Polychelates in Liquid Phase Hydrocarbon Oxidation —A. I. Min'kov, G. M. Alikina, Yu. M. Gridnev, and N. P. Keier	556	632
Kinetics for the Para-Ortho Conversion Reaction of Hydrogen on Different Metallic Catalysts —S. L. Kiperman	563	640
Polymerization of Ethylene on $VOCl_3$—Al (iso-C_4H_9)$_3$—N. D. Zavorokhin, P. E. Matkovskii, and N. M. Chirkov	572	650
The Effect of Poisoning on the Selectivity of Aluminum Oxide in the Decomposition of n-Butyl Alcohol—V. A. Dzis'ko, M. Kolovertnova, T. S. Vinnikova, and Yu. O. Bulgakova	576	655
Investigation of the Catalytic Properties of Organic Semiconductors Produced by Thermal Dehydrochlorination of Polyvinyl Chloride—E. S. Dokukina, O. A. Golovina, M. M. Sakharov, and R. M. Aseeva	580	660
Kinetics of the Oxidation of Carbon Monoxide on Modified Zinc Oxide—G. I. Chizhikova	585	666
Investigation of The Mechanism of the Catalytic Decomposition of Formic Acid Vapors on Palladium—A. A. Khomenko, L. O. Apel'baum, and M. I. Temkin	590	671
Study of the Kinetics of Heterogeneous Catalytic Reactions According to the Critical Conditions of Ignition. III. Synthesis of Alcohols from Carbon Monoxide and Hydrogen—Yu. B. Kagan, A. T. Ponomarenko, and A. Ya. Rozovskii	597	679
Kinetics of Ammonia Synthesis in Systems Not at Equilibrium—N. M. Morozov, E. N. Shapatina, L. I. Luk'yanova, and M. I. Temkin	605	688
Mass-Spectrometric Measurement of the Rate Constants of Elementary Reactions. II. Reactions of Hydrogen Atoms with Ethylene—V. P. Strunin, A. F. Dodonov, G. K. Lavrovskaya, and V. L. Tal'roze	610	693
Influence of the Adsorption of Ammonia on the Absorption of Thin Layers of Gold in the Visible Region of the Spectrum—V. D. Yagodovskii and S. L. Grigorovich	615	698
Investigation of the Interaction of Aromatic Molecules with Cationized and Decationized Zeolites by the Method of Ultraviolet Spectroscopy —A. V. Kiselev, L. A. Kupcha, and V. I. Lygin	621	705
Study of the Structure of the Adsorption Centers of Aluminum—Chromium Catalysts of Paraffin Dehydrogenation According to Optical Spectra and EPR Spectra —V. A. Shvets and V. B. Kazanskii	627	712
Investigation of the Decomposition of Ammonia on Iron by the Method of Secondary Ion-Ion Emission—V. I. Shvachko and Ya. M. Fogel'	635	722
Radiation Chemisorption of Oxygen on γ-Al_2O_3—Yu. A. Kolbanovskii and M. N. Masterova	639	727
BRIEF COMMUNICATIONS		
Reaction of a Hydrogen Atom in the System $H_2O + H_2SO_4 + FeSO_4$. III. Reaction with Saturated Organic Compounds—N. M. Bazhin, É. V. Kuznetsov, N. N. Bubnov, and V. V. Voevodskii	643	732

	Engl.	Russ.
The Effect of Additives on the Thermal Decomposition of Ammonium Perchlorate —A. V. Boldyreva and V. N. Mozzhova	646	734
Disproportionation Kinetics of the Dimethyl Ester of Dihydroxymethylene Glycol —V. V. Ivanov, V. P. Volkov, V. N. Ivanov, and N. S. Enikolopyan	648	736
The Effect of Fluorination on the Acidic Properties of Aluminum Oxide —V. A. Chernov and T. V. Antipina	651	739
Oxygen-Initiated Heterogeneous-Catalytic Condensation of Olefins in the Presence of Hydrogen. VII. Conversion of 2-Pentene—Ya. T. Éidus, N. I. Ershov, and V. R. Erokhina	654	742
The Effect of the Cooling Conditions of a Ni-Al Alloy on the Activity of Raney Nickel Catalyst—A. B. Fasman, T. Kabiev, D. V. Sokol'skii, and G. A. Pushkareva	658	745
The Effect of HF Currents on the Catalytic Synthesis Kinetics of Ammonia —M. V. Tovbin and T. P. Kozlova	661	747
Catalytic Activity of Alumina and Acid Properties of Its Surface—E. N. Rosolovskaya, O. L. Shakhnovskaya, and K. V. Topchieva	664	750
Catalytic Conversions of Piperylene Diluted by Ethylene or Water Vapor —T. I. Naryshkina, N. I. Shuikin, L. S. Beresneva, and Z. A. Rashchupkina	667	752
The Infrared Spectra of V_2O_5 Containing Different Quantities of the Oxides of Molybdenum, Cobalt, and Phosphorus—B. E. Zaitsev, Z. I. Ezhkova, and I. I. Ioffe	670	755
Investigation of the Effect of Selenium upon the Adsorption and Catalytic Properties of Silver—L. A. Rudnitskii and N. V. Kul'kova	674	759
Pulsed Chromatographic Method of Measuring the Adsorption Isotherms of Substances from Mixtures of Gases and Vapors—O. P. Krivoruchko, M. I. Yanovskii, and B. M. Nashibochnikov	678	763
LETTERS TO THE EDITOR		
Change in the Equilibrium Concentration of Triplet States and Photosensitized Decomposition of Methanol—M. V. Alfimov, I. G. Batekha, and V. A. Smirnov	681	766
On the Mechanism of the Acylation of Hydroperoxides by Acetic Anhydride —V. L. Antonovskii and O. K. Lyashenko	683	767
Direct Production of Complexes of Molecular Nitrogen with Ruthenium Compounds —A. E. Shilov, A. K. Shilova, and Yu. G. Borod'ko	685	768
On the Radiation Stability of Certain Polyphenylalkanes—G. K. Vasil'ev, M. A. Chel'tsova, and I. I. Chkheidze	686	769
NECROLOGY		
Mikhail Vladimirovich Polyakov	688	771

Number 5 September-October, 1966

	Engl.	Russ.
Reactivity of Polyradicals with Weak Electron Exchange — A. L. Buchachenko and O. P. Tkacheva (Sukhanova)	689	777
On the Causes of the Influence of Preliminary Irradiation upon the Rate of Thermal Decomposition of Ammonium Perchlorate — V. F. Komarov, V. V. Boldyrev, V. K. Zhuravlev, and G. V. Ivanov	697	788
Catalytic Activity of Various Crystalline Forms of Neodymium Oxide in Oxidation of Carbon Monoxide — L. A. Sazonov, M. G. Logvinenko, and L. M. Plyasova	703	795
The Oxidation of Carbon Monoxide by Complex Compounds of Platinum —N. K. Eremenko and K. I. Matveev	707	800
Kinetics and Mechanism of the Reaction between Isocyanates and Alcohols Catalyzed by Organotin Compounds. III. Relation between the Activity of the Catalyst and the Stability of Its Complex with Alcohol — O. V. Nesterov, V. B. Zabrodin, Yu. N. Chirkov, and S. G. Éntelis	711	805

	Engl./Russ.
Conversion of n-Heptane and n-Octane in the Presence of an Aluminomolybdenum Catalyst – Yu. N. Usov, E. V. Skvortsov, N. I. Kuvshinova, G. A. Raikova, and V. F. Il'in	714 809
The Catalytic Activity of Ni–MgO Mixed Catalysts. I – V. Nikolajenko, Vl. Danes, and M. Krivanek	720 816
Conversion of Propylene Oxide over Certain Carriers and Silver Catalysts. I. The Use of Alumina and Silicon Carbide as Carriers – A. S. Vaabel', A. A. Torgasheva, and L. M. Kaliberdo	727 826
Catalytic Dehydrogenation of *l*-Menthol – E. I. Klabunovskii, L. F. Godunova, and A. A. Balandin	731 831
Investigation of the Synthesis of Ammonia on Iron by the Method of Secondary Ion–Ion Emission – V. I. Shvachko, Ya. M. Fogel', and V. Ya. Kolot	734 834
Adsorption and Catalytic Properties of Zeolites. I. Kinetics for the Cracking Reaction on Type Y Zeolites – B. V. Romanovskii, Kho Shi Tkhoang, K. V. Topchieva, and L. I. Piguzova	739 841
Effect of the Chemisorption of Reagents on the Activity of a Chromium Oxide Catalyst – V. M. Belousov, A. V. Gershingorina, M. Ya. Rubanik, and Zh. F. Verlan	746 850
Porous Structure and Strength of Aluminum Oxide – V. A. Dzis'ko, T. S. Vinnikova, L. M. Kefeli, and I. A. Ryzhak	754 859
Qualitative Analysis of Equations Describing Exothermic Processes. Catalytic Processes in a Porous Slab– T. I. Zelenyak, V. S. Beskov, and M. G. Slin'ko	760 865
Stability of a Tubular Reactor with a Heat Exchanger – L. M. Pis'men	767 874
Kinetic Model of a Chemical Process in a Fluidized Catalyst Bed – G. N. Abaev	773 881
BRIEF COMMUNICATIONS	
Catalytic Properties of Certain Refractory Compounds in the Thermal Decomposition of Methane – V. M. Grosheva and G. V. Samsonov	604 892
The Catalytic Activity of γ-Irradiated Aqueous Solutions of Co (III) Complex Salts – G. A. Shagisultanova and L. N. Neokladnova	785 894
The Dehydration of Isopropyl Alcohol on Natural Crystalline Aluminosilicates – I. M. Kolesnikov and G. M. Panchenkov	787 896
The Kinetics of the Reductive Alkylation of 4-Nitrodiphenylamine with Acetone on a Hydrogenating Catalyst – I. I. Ioffe, Yu. T. Nikolaev, G. A. Sukhareva, V. M. Balashov, and L. S. Kamneva	790 898
Investigation of the Hydrogenation Mechanism of Ethylene on a Homogeneous Pt–Sn-Chloride Catalyst – A. P. Khrushch, A. A. Tokina, and A. E. Shilov	793 901
On the Question of the Mechanism of Ketone Synthesis from Primary Alcohols – Kh. M. Minachev, G. A. Loginov, and M. A. Markov	796 904
An EPR Study of the Acid Sites of Decationized Zeolite – A. V. Kiselev, V. I. Lygin, and M. Sh. Rozenberg	799 907
The Application of Infrared Spectroscopy to the Study of the Surface Properties of Promoted Alumina – T. V. Antipina, A. V. Uvarov, and S. P. Tikhomirova	802 910
A Study of EPR Spectra in the NiO–MgO System – A. A. Slinkin, E. A. Fedorovskaya, and A. M. Rubinshtein	804 912
Gradientless Reactor Suitable for Studying the Kinetics of Liquid Phase Reactions in Gas–Liquid Systems – G. F. Tikhonov, G. K. Shestakov, O. N. Temkin, and R. M. Flid	807 914
LETTERS TO THE EDITOR	
Detection of the EPR Signal in the Interaction of Tetranitromethane with Olefins – S. V. Zenin, G. B. Sergeev, and I. A. Leenson	809 917
Determination of the Concentration of Homophase Additives in Silver Salts in the Study of Thermal Decomposition – V. I. Eroshkin and N. M. Bazhin	811 918

	Engl.	Russ.
Investigation of the Thermal Decomposition of Iron Oxalates by the Methods of Nuclear Gamma Resonance and Derivatography – I. P. Suzdalev, A. V. Shkarin, G. M. Zhabrova, V. I. Gol'danskii, L. A. Korytko, and B. M. Kadenatsi	812	919
Catalytic Activity of Nickel Titanate – N. P. Keier, I. S. Sazonova, I. L. Mikhailova, and T. V. Belosludtseva	814	920
DISCUSSION		
On the Role of the Solid Dissociation Product in Reactions of Thermal Decomposition of Solids (Reply to Critical Remarks of V. V. Boldyrev) – E. A. Prodan	816	922
On the Desorption of Ammonia from a Silica Gel Surface – G. Bliznakov and R. Polikarova	818	931
Calorimetric Heats of Sorption of Hydrogen on Molybdenum Films – S. Cerny, V. Pones, and L. Hladek	818	932
Magnetic Susceptibility of Dispersed Palladium – H. Kubicka	818	932
Limiting Stages of Contact Catalytic Hydrogenation in an Aqueous Solution I. Adsorption of Gas – F. Nagy, A. Petno, and D. Möger	819	943
Catalytic Decomposition of Ammonia: the Effect of an Electric Field on the Catalyst's Activity – D. Vladov, Vl. Dyakovitch, and Sh. Dinkov	819	945

Number 6 November-December, 1966

	Engl.	Russ.
Reaction Kinetics of n-Butyllithium with n-Butyl Bromide in the Presence of Electron-Donor Additions – A. I. Shatenshtein, E. A. Kovrizhnykh, and V. M. Basmanova	821	953
Radial Distribution of Radicals in a Diffusion Flame, Allowing for Quadratic Recombination – B. V. Pavlov and L. Yu. Rusin	827	961
Radiolytic Oxidation of Methanol – B. Ya. Ladygin and V. V. Saraeva	832	967
Radiolysis of Water Adsorbed on Silica Gel – Z. L. Krylova and P. I. Dolin	840	977
Radiation Chemical Investigations of Liquid Polyorganosiloxanes with Different Amounts of Aromatic Groups Either in the Main Chain or as Side Groups – T. I. Ponomareva, T. A. Krasovskaya, M. V. Sobolevskii, and A. N. Ponomarev.	845	983
Polymerization Kinetics of Acrylic Ester Oligomers in the Highly Polymerized Stages, Studied by the EPR Method – B. R. Smirnov, G. V. Korolev, and A. A. Berlin.	851	990
Catalytic Oxidation of Cyclohexylhydroxylamine in the Presence of Cu(II) Complexes – N. B. Shitova, K. I. Matveev, and M. M. Danilova	855	995
Reactions of the Hydrogen Atom in the $H_2O + H_2SO_4 + FeSO_4$ System. IV. Reactions with Aromatic Compounds – N. M. Vazhin, P. V. Schastnev, G. M. Zhidomirov, N. N. Bubnov, and V. V. Voevodskii	859	999
Contribution Made by the Crystal Field Effect to the Oxygen Bond Energy in Oxides with the Spinel Structure – N. N. Bulgakov and Yu. A. Borisov.	866	1007
Role of Thermal Spikes in the Radiation Decomposition of Salts by Heavy Charged Particles – A. N. Oblivantsev, V. V. Boldyrev, L. I. Eremin, and V. M. Lykhin	872	1015
Composition and Optical Rotation of Products of the Catalytic Conversion of 1-Menthol – E. I. Klabunovskii, L. F. Godunova, and A. A. Balandin	876	1020
Investigation of the Catalytic Activity of Ni – MgO Mixed Catalysts. II – V. Nikolajenko, Vl. Danes, and M. Krivanek	880	1025
Hydrogenation of Allyl Alcohol on Platinum and Palladium Catalysts Deposited on Polyacrylonitrile – D. V. Sokol'skii, O. A. Tyurenkova, V. A. Dashevskii, and E. I. Seliverstova	885	1032
Effect of the pH of the Medium on the Direction of the Reaction for the Catalytic Hydrogenation of β-Nitrostyrene – L. Kh. Freidlin, E. F. Litvin, and V. M. Chursina.	891	1039

	Engl./Russ.
Charge of the Surface of Some Oxide Catalysts upon the Adsorption of a Mixture of Propylene and Oxygen—L. E. Derlyukova and A. V. Krylova	896 1045
Influence of Additives on the Kinetics of the Oxidation of Iron Catalysts. I —M. M. Lebedeva, A. Ya. Rozovskii, and F. V. Korenevskaya	902 1052
Study of the EPR Spectra of Coals and Semicokes—A. A. Sidorov and V. F. Anufrienko	908 1060
BRIEF COMMUNICATIONS	
Mechanism for Stopping the Reaction of Methane in Atomic Oxygen Flame —V. Ya. Basevich and S. M. Kogarko	912 1065
Decomposition of Tetrachlorosilane under Adiabatic Compression—F. B. Vurzel', L. S. Polak, and V. S. Shchipachev	916 1068
Mechanism of the Catalase Process—G. I. Likhtenshtein, V. Ya. Nikitin, and A. P. Purmal'	919 1071
Kinetics of the Hydrolysis of Ferricinium Ion—A. A. Pendin, M. S. Zakhar'evskii, and P. K. Leont'evskaya	922 1074
Changes in the EPR Spectra of Polychelate Copper Compounds during Heat Treatment—G. F. Gerasimova, V. F. Anufrienko, and N. P. Keier	926 1078
Analogy between Heat Transfer in a Boiling Liquid and Mass Transfer in a Heterogeneous Reaction Accompanied by Liberation of a Gas —G. A. Aksel'rud and L. A. Pokhodenko	929 1081
EPR Spectrum of Radicals which Control the Polymerization Chain of Tetrafluoroethylene— A. S. Baberkin, V. G. Pechnikov, and E. V. Volkova	932 1084
Comparative Data on the Kinetics of the Hydrogenation of Benzene on Nickel-Copper and Nickel-Cobalt Alloys—E. I. Evzerikhin and G. D. Lyubarskii	934 1085
Relation between the Shift of the Catalyst Potential and the Reaction Rate in Liquid Phase Hydrogenation Processes. II. Steady-State Electrochemical Potential of the Catalyst and the Optimum Conditions of the Process—V. A. Druz'	938 1089
Kinetics of Cyclohexane Dehydrogenation in a Gradientless System. III —A. A. Andreev, D. M. Shopov, and S. L. Kiperman	941 1092
Contact Potential Difference of Rare-Earth Oxides as a Function of the Firing Temperature in Oxygen—L. A. Sazonov and V. A. Lyadno	944 1094
Influence of an Electric Field on Chemisorption of Molecules on the Surface of Germanium—V. I. Lyashenko, A. A. Serba, and I. I. Stepko	946 1095
Novel Gradientless Reactor and Feeder Suitable for Studying the Kinetics of Gas Reactions—I. I. Ioffe, V. S. Fedorov, and V. I. Saienko	949 1099
Mechanisms of the Chemisorption of Carbon Monoxide on Promote Iron Catalysts. I —F. V. Korenevskaya and A. Ya. Rozovskii	951 1100
EPR Spectrum Originating during the Adsorption of Oxygen on Rutile —V. M. Mastikhin	956 1105
CHRONICLES	
Aleksandr Alekseevich Koval'skii (On His 60th Birthday)	957 1106
LETTERS TO THE EDITOR	
Acid Properties of Binary Silicate Catalysts—N. S. Kotsarenko, L. G. Karakchiev, and V. A. Dzis'ko	960 1109
ABSTRACTS	
Adsorption of Oxygen on Nickel—J. Müller	961 1110
Oxidation of Carbon Monoxide and "Adsorbate-Gas Phase" Exchange Reactions in the Presence of MnO_2-Based Catalysts—K. Klier and K. Kuchynka	961 1110
INDEX	
Author Index, Volume 7, 1966	965
Tables of Contents, Volume 7, 1966	969